

DO Upgrade Schedule
Muon Level 1 Trigger

ID	Task Name	Duration	Start	Finish	Predecessors	Constraint	WBS	Resource Names
2218	Muon Level 1 Trigger	252.8 w	1/2/96	2/5/01		As Soon As		
2219	M3-Muon Level 1 Trigger TDR Submitted	0 w	1/18/99	1/18/99		Start No Ear		
2220	R AND D (Serial Link Daughter Board-SLDB)	228.4 w	1/2/96	8/8/00		As Soon As		
2221	Design 1553 Card	4 w	1/2/96	1/29/96		As Soon As f		EEU143[0.2]
2222	Layout/Fab 1553 Card	4 w	1/30/96	2/26/96	2221	As Soon As f		ETU143
2223	Test 1553 Card	8 w	2/27/96	4/22/96	2222	As Soon As f		ETU143,PhysU143
2224	Design/Layout/Fabricate Prototype SLDB	12 w	1/2/96	3/25/96		As Soon As f		EEU143[0.2]
2225	Test Prototype SLDB	40 w	5/21/96	3/13/97	2224,2226	As Soon As f		EEU143[0.2],PhysU143[0.2]
2226	Design/Layout/Fabricate SLDB Tester	8 w	3/26/96	5/20/96	2224	As Soon As f		EEU143[0.2]
2227	Layout/Fabricate/Assemble V2 SLDB	6 w	6/9/97	7/21/97	2225FS+12 w	As Soon As f		EEU143[0.2]
2228	Test V2 SLDB	12 w	7/22/97	10/14/97	2227	As Soon As f		EEU143[0.2],PhysU143[0.2]
2229	Layout/Fabricate/Assemble V3 SLDB	28 w	10/15/97	5/13/98	2228	As Soon As f		EEU143[0.1]
2230	Test V3 SLDB	20 w	5/14/98	10/5/98	2229	As Soon As f		EEU143[0.1],PhysU143[0.25]
2231	Layout/Fabricate/Assemble Preproduction SLDB	12 w	1/25/99	4/16/99		Start No Earl		
2232	Test Preproduction SLDB	28 w	4/19/99	11/3/99	2231	As Soon As f		
2233	Layout/Fabricate/Assemble Production SLDB	33 w	11/4/99	7/11/00	2232	As Soon As f		
2234	Test Production SLDB	4 w	7/12/00	8/8/00	2233	As Soon As f		
2235	CRATES	159 w	9/2/97	11/17/00		As Soon As		
2236	CRATE BACKPLANE	159 w	9/2/97	11/17/00		As Soon As		
2237	Design Prototype Backplane	18 w	9/2/97	1/20/98		Start No Earl		EEU143[0.2]
2238	Layout/Fabricate Prototype Backplane	8 w	5/1/98	6/26/98		Start No Earl		ETU143
2239	Test Prototype Backplane	12 w	6/29/98	9/22/98	2238	As Soon As f		EEU143[0.1],PhysU143[0.2]
2240	Design Extender Cards	12 w	5/13/98	8/6/98	2237FS+16 w	As Soon As f		EEU143[0.05]
2241	Layout/Fabricate Extender Cards	32 w	8/7/98	4/6/99	2240	As Soon As f		PhysU143
2242	Design Preproduction Backplane	8 w	5/1/98	6/26/98		Start No Earl		EEU143[0.2]
2243	Layout/Fabricate Preproduction Backplane	12 w	6/29/98	9/22/98	2242	As Soon As f		
2244	Test Preproduction Backplane	34 w	9/23/98	6/4/99	2243	As Soon As f		PhysU143[0.1]
2245	Backplane Pre Production Testing Complete	0 w	6/4/99	6/4/99	2244	As Soon As		
2246	Layout/Fabricate Production Backplane	28 w	12/1/99	6/28/00	2245	Start No Earl	1.4.3.2.9(.3)	k\$(0.41),k\$c[0.05]
2247	Test Production Backplane	4 w	6/29/00	7/27/00	2246	As Soon As f		PhysU143[0.1]
2248	Assemble/Test Cables	16 w	6/1/00	9/22/00		Start No Earl		PhysU143[0.25],MTF143[2]
2249	Install Cables	8 w	9/25/00	11/17/00	2248	As Soon As f		PhysU143[0.25],MTF143
2250	Fabricate and Test Prototype Splitter Cards	20 w	1/4/99	5/21/99		Start No Earl		EEU143[0.2]
2251	Fabricate and Test Preproduction Splitter Cards	25.8 w	10/15/99	4/28/00	2250	Start No Earl		
2252	Splitter Card PreProduction Testing Complete	0 w	4/28/00	4/28/00	2251	As Soon As		
2253	Fabricate and Test Production Splitter Cards	12 w	5/1/00	7/25/00	2252	As Soon As f		EEU143[0.2]
2254	POWER SUPPLIES	120 w	6/18/98	11/17/00		As Soon As		
2255	Design Prototype Power Supply	60 w	6/18/98	9/2/99		Start No Earl		EEF143[0.5]
2256	Procure/Build Prototype Power Supply	16 w	9/3/99	1/11/00	2255	As Soon As f		EEF143[0.5]
2257	Test Prototype Power Supply	24 w	1/12/00	6/28/00	2256	As Soon As f		
2258	Power Supply Prototype Testing Complete	0 w	6/28/00	6/28/00	2257	As Soon As		
2259	Procure/Build Production Power Supply	12 w	6/29/00	9/22/00	2258	As Soon As f		ETF143[0.5]
2260	Test and install production power supply	8 w	9/25/00	11/17/00	2259	As Soon As f		ETF143[0.5]
2261	MUON TRIGGER CARD-MTCXX	163.8 w	7/28/97	11/16/00		As Soon As		
2262	Design Prototype MTCxx	60 w	7/28/97	10/9/98		Start No Earl		EEU143[0.4],PhysU143[0.2]
2263	MTCxx Design Review	0.2 w	4/28/98	4/28/98		Start No Earl		
2264	Procure Prototype MTCxx Parts	6 w	10/12/98	11/20/98	2262	As Soon As f		EEU143[0.1]
2265	Layout, Fabricate, and Assemble Prototype MTCxx	9 w	10/26/98	1/12/99	2262FS+2 w	As Soon As f		EEU143[0.1]
2266	Develop Test Plan and Software Tools	8 w	10/26/98	1/5/99	2265SS	As Soon As f		EEU143[0.05],PhysU143[0.2]
2267	Prototype MTCxx, MTFB, and MTCM Complete	0 w	1/12/99	1/12/99	2265,2279,2292	As Soon As		
2268	Test Prototype MTCxx	24 w	1/13/99	6/30/99	2243,2267,2305	As Soon As f	1.4.3.2.12(.63)	EEU143[0.1],PhysU143[0.25],k\$(0.19),k\$c[0.03]
2269	Design Preproduction MTCxx	4 w	7/1/99	7/29/99	2268	As Soon As f		EEU143[0.25]
2270	Layout, Fabricate, and Assemble Preproduction (10%) MTCx	10 w	7/30/99	10/8/99	2269	As Soon As f		EEU143[0.1]
2271	Preproduction MTCxx, MTFB, and MTCM Complete	0 w	7/12/00	7/12/00	2270,2283,2296	As Soon As		
2272	Test Preproduction MTCxx	12 w	4/17/00	7/11/00		Start No Earl		EEU143[0.1],ETU143[0.1],PhysU143[0.5]
2273	Layout, Fabricate, and Assemble Production MTCxx	10 w	7/12/00	9/20/00	2272	As Soon As f	1.4.3.2.1(.9)	EEU143[0.1],k\$(1.22),k\$c[0.18]
2274	Production MTCxx, MTFB, and MTCM Complete	0 w	9/21/00	9/21/00	2273,2286,2299	As Soon As		
2275	Test, Install, and Commission MTCxx	8 w	9/22/00	11/16/00	2274	As Soon As f		EEU143[0.1],ETU143[0.1],PhysU143[0.5]
2276	MUON TRIGGER FLAVOR BOARD-MTFB	163.8 w	7/28/97	11/16/00		As Soon As		
2277	Design Prototype MTFB	60 w	7/28/97	10/9/98		Start No Earl		EEU143[0.4],PhysU143[0.2]
2278	Procure Prototype MTFB Parts	6 w	10/12/98	11/20/98	2277	As Soon As f		EEU143[0.1]
2279	Layout, Fabricate, and Assemble Prototype MTFB	9 w	10/26/98	1/12/99	2277FS+2 w	As Soon As f		EEU143[0.1]
2280	Develop Test Plan and Software Tools	8 w	10/26/98	1/5/99	2279SS	As Soon As f		EEU143[0.05],PhysU143[0.2]
2281	Test Prototype MTFB	24 w	1/13/99	6/30/99	2265	As Soon As f		EEU143[0.1],PhysU143[0.25]
2282	Design Preproduction MTFB	18 w	10/1/99	2/21/00	2281	Start No Earl		EEU143[0.25]
2283	Layout, Fabricate, and Assemble Preproduction (10%) MTFB	34 w	10/29/99	7/12/00	2282SS+4 w	As Soon As f	1.4.3.2.2(.06)	EEU143[0.1],k\$(0.06),k\$c[0.01]
2284	Test Preproduction MTFB	12 w	5/16/00	8/9/00	2283FF+4 w	As Soon As f		EEU143[0.1],ETU143[0.1],PhysU143[0.5]
2285	MTFB PreProduction Testing Complete	0 w	8/9/00	8/9/00	2284	As Soon As		
2286	Layout, Fabricate, and Assemble Production MTFB	12 w	6/28/00	9/21/00	2284SS+6 w	As Soon As f	1.4.3.2.2(.9)	EEU143[0.1],k\$(0.88),k\$c[0.13]
2287	Test, Install, and Commission MTFB	8 w	9/22/00	11/16/00	2286	As Soon As f		EEU143[0.1],ETU143[0.1],PhysU143[0.5]
2288	MUON TRIGGER CRATE MANAGER-MTCM	223.6 w	3/18/96	9/20/00		As Soon As		
2289	Design Prototype MTCM	56 w	3/18/96	4/30/97		Start No Earl		EEU143[0.8],PhysU143[0.2]

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2290	MTCM Design Review	0.2 w	3/6/97	3/6/97	2289FS-8 w	As Soon As f		
2291	Procure Prototype MTCM Parts	12 w	4/3/97	6/26/97	2289FS-4 w	As Soon As f		EEU143[0.1]
2292	Layout, Fabricate, and Assemble Prototype MTCM	8 w	5/30/97	7/25/97	2289FS+4 w	As Soon As f		EEU143[0.1]
2293	Develop Test Plan and Software Tools	8 w	5/30/97	7/25/97	2292SS	As Soon As f		EEU143[0.05],PhysU143[0.2]
2294	Test Prototype MTCM	40 w	7/28/97	5/19/98	2292	As Soon As f		EEU143[0.2],PhysU143[0.5]
2295	Design Preproduction MTCM	16 w	10/12/98	2/16/99	2262	As Soon As f		EEU143[0.25]
2296	Layout, Fabricate, and Assemble Preproduction (10%) MTCM	10 w	2/17/99	4/27/99	2295	As Soon As f		EEU143[0.1]
2297	Test Preproduction MTCM	32 w	4/28/99	12/14/99	2296	As Soon As f		EEU143[0.1],ETU143[0.1],PhysU143[0.5]
2298	MTCM PreProduction Testing Complete	0 w	12/14/99	12/14/99	2297	As Soon As		
2299	Layout, Fabricate, and Assemble Production MTCM	10 w	5/15/00	7/25/00	2297	Start No Earl	1.4.3.2.3(.86)	EEU143[0.1],k\$[0.37],k\$c[0.05]
2300	Test, Install, and Commission MTCM	8 w	7/26/00	9/20/00	2299	As Soon As f		EEU143[0.05],ETU143[0.05],PhysU143[0.5]
2301	MUON TRIGGER TESTER-MTT	121.4 w	11/1/96	4/23/99		As Soon As		
2302	Design MTT	24 w	11/1/96	5/1/97		Start No Earl		EEF143
2303	Procure Prototype MTT Parts	12 w	4/4/97	6/27/97	2302FS-4 w	As Soon As f		EEF143[0.1]
2304	Develop Test Plan and Software Tools	12 w	4/4/97	6/27/97	2303SS	As Soon As f		PhysU143[0.1]
2305	Layout/Fabricate Prototype MTT	12 w	5/2/97	7/28/97	2302	As Soon As f		EEF143
2306	Test Prototype MTT	36 w	7/29/97	4/22/98	2305	As Soon As f		EEF143[0.5],PhysU143[0.5]
2307	MTT Prototype Testing Complete	0 w	4/22/98	4/22/98	2306	As Soon As		
2308	Design Production MTT	9 w	3/1/98	5/1/98	2307	As Soon As f		EEF143
2309	Layout/Fabricate/Assemble Production MTT	12 w	7/15/98	10/7/98		Start No Earl		EEF143[0.2]
2310	Test Production MTT	26 w	10/8/98	4/23/99	2309	As Soon As f		EEF143,PhysU143[0.5]
2311	MDT CENTROID FINDER-MCEN	198.6 w	12/1/96	12/8/00		As Soon As		
2312	Design Prototype MCEN	32 w	12/1/96	7/25/97		Must Start O		EEU143[0.5],PhysU143[0.1]
2313	MCEN and MCCM Design Review	0 w	7/25/97	7/25/97	2312	As Soon As		
2314	Revise Design	2 w	7/28/97	8/8/97	2313	As Soon As f		EEU143[0.5],PhysU143[0.1]
2315	Layout/Fabricate/Assemble Prototype MCEN	32 w	8/11/97	4/7/98	2314	As Soon As f		ETU143
2316	Test Prototype MCEN	82.2 w	4/8/98	12/1/99	2315	As Soon As f		EEU143[0.5],ETU143[0.5],PhysU143[0.5]
2317	Design Preproduction MCEN	6 w	2/21/00	3/31/00	2316	Start No Earl		EEU143[0.5]
2318	Layout/Fabricate/Assemble Preproduction MCEN	7 w	4/3/00	5/19/00	2317	As Soon As f		
2319	Test Preproduction MCEN	10 w	5/22/00	8/1/00	2318	As Soon As f		EEU143[0.25],ETU143[0.25],PhysU143[0.5]
2320	MCEN PreProduction Testing Complete	0 w	8/1/00	8/1/00	2319	As Soon As		
2321	Layout/Fabricate/Assemble Production MCEN	10 w	8/2/00	10/11/00	2319	As Soon As f		
2322	Test, Install, and Commission MCEN	8 w	10/12/00	12/8/00	2321	As Soon As f		EEU143[0.1],ETU143[0.25],PhysU143[0.5]
2323	CENTROID PHYSICS BOARD-MCPB	193.6 w	2/20/97	1/18/01		As Soon As		
2324	Design Prototype	24 w	2/20/97	8/8/97		Start No Earl		
2325	Layout/Fabricate/Assemble Prototype MCPB	32 w	8/11/97	4/7/98	2324	As Soon As f		
2326	Test Prototype MCPB	82.2 w	4/8/98	12/1/99	2325	As Soon As f		
2327	Design Preproduction MCPB	2 w	5/8/00	5/19/00	2326,2317	Start No Earl		
2328	Layout/Fabricate/Assemble Preproduction MCPB (10%)	5 w	5/22/00	6/26/00	2327	As Soon As f		
2329	Test Preproduction MCPB	10 w	6/27/00	9/6/00	2328	As Soon As f		
2330	MCPB PreProduction Testing Complete	0 w	9/6/00	9/6/00	2329	As Soon As		
2331	Layout/Fabricate/Assemble Production MCPB	10 w	9/7/00	11/15/00	2330	As Soon As f		
2332	Test, Install, and Commission MCPB	8 w	11/16/00	1/18/01	2331	As Soon As f		
2333	CENTROID FINDER MANAGER-MCCM	152 w	1/14/98	2/5/01		As Soon As		
2334	Design Prototype	24 w	1/14/98	7/1/98	2315FS-12 w	As Soon As f		EEU143[0.5],PhysU143[0.1]
2335	Layout/Fabricate/Assemble Prototype MCCM	40 w	7/2/98	4/27/99	2334	As Soon As f		ETU143
2336	MCEN, MCCM, MCPB Prototypes Complete	0 w	4/27/99	4/27/99	2315,2325,2335	As Soon As		
2337	M3-Muon Level 1 Trigger Prototype Complete	0 w	4/27/99	4/27/99	2267,2336	As Soon As		
2338	Test Prototype MCCM	56 w	4/28/99	6/14/00	2337	As Soon As f		ETU143[0.5],PhysU143[0.5],EEU143[0.5]
2339	Design Preproduction MCCM	4 w	6/15/00	7/13/00	2338,2327	As Soon As f		EEU143[0.5]
2340	Layout/Fabricate/Assemble Preproduction MCCM (10%)	8 w	7/14/00	9/8/00	2339	As Soon As f		
2341	10% MCEN, MCPB, MCCM Complete	0 w	9/8/00	9/8/00	2318,2328,2340	As Soon As		
2342	Test Preproduction MCCM	6 w	9/11/00	10/20/00	2340	As Soon As f		EEU143[0.25],ETU143[0.25],PhysU143[0.5]
2343	M3-Muon Level 1 Trigger Preproduction Testing Complete	0 w	10/20/00	10/20/00	2272,2284,2297,2319,2329,2341	As Soon As		
2344	Layout/Fabricate/Assemble Production MCCM	8 w	10/23/00	12/19/00	2342	As Soon As f		
2345	MCEN, MCCM Production Complete	0 w	12/19/00	12/19/00	2321,2344	As Soon As		
2346	Test, Install, and Commission MCCM	6 w	12/20/00	2/5/01	2344	As Soon As f		EEU143[0.1],ETU143[0.25],PhysU143[0.5]
2347	SOFTWARE	226.2 w	1/2/96	7/24/00		As Soon As		
2348	Trigger Simulator	220 w	1/2/96	6/8/00		Start No Earl		PhysU143[0.1]
2349	Control Software	104 w	6/15/98	7/24/00		Start No Earl		PhysU143[0.1]
2350	MOU Obligations	34.2 w	8/3/98	4/15/99		As Soon As		
2351	Obligate FY98 Funds To Univ of Arizona	0.2 w	8/3/98	8/3/98		Start No Earl	1.4.3.2.1(.1),1.4.3.2.10,1.4.3.2.1	k\$[4.53],k\$c[0.51]
2352	Obligate FY99 Funds To Univ of Arizona	0.2 w	4/15/99	4/15/99		Start No Earl		
2353	Obligate FY98 Funds to Boston Univ	0.2 w	8/3/98	8/3/98		Start No Earl	1.4.3.2.11(.5),1.4.3.2.12(.13),1.4	k\$[2.7],k\$c[0.37]
2354	Obligate FY99 Funds to Boston Univ	0.2 w	4/15/99	4/15/99		Start No Earl		